

The test for definiteness is whether those skilled in the art would understand what is claimed when the claim is read in light of the specification. Definiteness of claim language must be analyzed, not in a vacuum, but in light of: (A) the content of the particular application disclosure; (B) the teachings of the prior art; and (C) the claim interpretation that would be given by one possessing the ordinary level of skill in the pertinent art at the time the invention was made. Applicants submit that the scope of claim 19 is sufficiently clear and unambiguous such that a skilled artisan would understand what the claimed invention is when the claim is read in light of the specification and the teachings of the prior art.

Rejection Under 35 USC §101

Applicants expressly incorporate by reference the arguments presented on pages 11-16 of the Amendment. Applicants first argued that a *prima facie* case of unpatentability had not been established with respect to claim 38. The Examiner responded that the body of claim 38 is identical in concept to that of claim 25 and therefore is considered to have been included without redundancy (Final Office Action, page 14). Applicants respectfully disagree and submit that the Examiner has made an improper final rejection. Claim 38 is not identical to claim 25. For example, claim 38 recites an apparatus comprising means for providing and means for iteratively learning. Claim 25, on the other hand, recites a method and does not recite means for providing and means for iteratively learning. Claim 38 was not addressed in the Office Action dated March 16, 2006. However, claim 38 was addressed in the Final Office Action (page 3). Thus, the Examiner made a new ground of rejection that was not necessitated by Applicants' amendment of the claims. As such, the Final Office Action was improperly made final (see MPEP §706.07(a)), and Applicants request that the Final Office Action be withdrawn and a new non-final office action be issued.

Applicants additionally argued that the claims are directed to statutory subject matter when analyzed in light of the "Interim Guidelines ... for Subject Matter Eligibility" (now MPEP §§2106 *et seq.*, Eighth Edition, Fifth Revision, August 2006). In response, the Examiner asserts that "the claims must produce ... a result that is a practical application and must be so stated. Methodology such as annotation without a specific result is abstract" (Final Office Action, pages 15 and 17). The Examiner further asserts:

[T]he claims must bring forth limitations that identify a result that is a practical application. Annotation as a methodology is abstract ... the annotation must be applied to something to produce a results that is a practical application ... to what is the annotation applied? The answer has to be specific or the claim is abstract ... or alternatively, to be considered a preemption of ideas. (Final Office Action, page 18)

Applicants repeat the argument that the Examiner is improperly focusing on individual claim elements, and is not considering the claims as a whole. Moreover, in view of the above-noted assertions, Applicants respectfully submit that the Examiner is applying an incorrect standard for analyzing statutory subject matter. According to MPEP §2106, a claim is directed to statutory subject matter if it falls within an enumerated statutory category and does not cover a 35 USC §101 judicial exception (*i.e.*, an abstract idea, natural phenomenon, or law of nature). Moreover, a claim that does cover a judicial exception may still be directed to statutory subject matter if it either: (A) transforms an article or physical object, or (B) produces a useful, concrete, and tangible result.

Contrary to the Examiner's assertion, there is no requirement that a result "must be stated" or that the claims "identify a result". Furthermore, there is no requirement that a claim element "must be applied to something to produce a result". Instead, a claim is considered statutory if it simply produces a useful, concrete, and tangible result.

Applicants adequately demonstrated that the claimed invention as a whole produces a useful result (Amendment, pages 12-14). Applicants also adequately demonstrated that the claimed invention as a whole produces a tangible result (Amendment, pages 14-16). Applicants submit that the claimed invention also produces a concrete result, although this prong of the analysis was not addressed by the Examiner. Therefore, the claims are directed to statutory subject matter.

Rejection Under 35 USC §102

Independent Claims 1, 35, and 39

The Examiner asserts that Basu shows the features of claims 1, 35, and 39 in the abstract and paragraphs 0008 and 0036 (Final Office Action, pages 4-5 and 18-19). Applicants expressly incorporate by reference the arguments presented on pages 17-19 of the Amendment.

Basu does not disclose providing at least partially annotated text data or unannotated text data with seeds or seed models, and applying the learned annotators to text data, as recited in the claimed invention. Instead, Basu only describes providing unannotated video data, *i.e.*, the TREC Video Corpus (para. 0037), not partially annotated text data or unannotated text data.

Additionally, Basu is completely silent as to seeds or seed models. Applicants submit that the Examiner's assertion that "the concept of seeds or seed models is merely the concept of labeling or classifying which is fundamental to Basu" (final Office Action, page 19) is an improper assertion of inherency (see MPEP §2112). Seeds or seed models, as recited and disclosed in the invention, are not inherent in Basu. Nor has the Examiner identified any explicit disclosure of seeds or seed models in Basu. Applicants respectfully request that the Examiner identify seeds or seeds models in Basu, or provide evidence that such is inherent in Basu, or withdraw the rejection.

Independent Claims 25 and 38

The Examiner asserts that Basu shows the features of claims 25 and 38 in the abstract and paragraphs 0028 (Final Office Action, pages 10-11 and 19-20). Applicants expressly incorporate by reference the arguments presented on pages 19-20 of the Amendment.

Basu does not disclose that at the end of each iteration, any annotation generated from the learned annotators, having a confidence level within a confidence level range, is corrected based on feedback. In Basu, the only disclosed measure of ambiguity (i.e., confidence) is associated with an example of unannotated data, not with a generated annotation. Basu uses ambiguity (i.e., confidence) to decide which unannotated examples to annotate, but does not associate ambiguity (i.e., confidence) with an annotation. Therefore, Basu cannot arguably disclose a generated annotation having a confidence level within a confidence level range.

Moreover, Basu does not disclose a confidence level within a confidence level range. Basu only discloses single measures of ambiguity, and makes no mention of a range.

Independent Claim 26

The Examiner asserts that Basu shows the features of claim 26 in the abstract and paragraphs 0028 (Final Office Action, pages 11 and 20-21). Applicants expressly incorporate by reference the arguments presented on page 21 of the Amendment.

Basu does not disclose a current document and document set. Instead, Basu describes a single video document (i.e., the TREC Video Corpus) on which the user provides annotations and the system concurrently trains.

Moreover, Basu does not disclose assigning a confidence level to each annotation instance. As discussed above, the only quantitative measure of ambiguity or confidence is provided for an example of unannotated data, and not for the annotation instance. However, an example of unannotated data does not constitute an annotation instance.

Dependent Claims

Claims 2-24, 27-34, 36, and 37 depend from an allowable base claim and are allowable at least for the reasons discussed above. Moreover, Basu does not disclose at least the following:

Claim 8 - Basu does not disclose preprocessing groups of words or phrases into single units before the iteratively learning step. The Examiner asserts that Basu sets forth preprocessing of annotations (Final Office Action, page 21). The “preprocessing of annotations” is not what is claimed. Rather, the claim recites preprocessing groups of words or phrases into single units.

Claim 10 - Basu does not disclose that if confidence levels do not fall within a closed interval then a transformation will be applied to map a confidence level range onto the closed interval [0 . . .

1] for purposes of presentation to the user. Basu makes no mention of a confidence range or interval. Therefore, Basu cannot argueably disclose applying a transformation to map a confidence level onto the closed interval of [0 ... 1].

Claim 16 - Basu does not disclose that bins allows a user to inspect some examples and choose to accept or reject all instances in that bin. To the contrary, Basu only describes that the user verifies each annotation instance singularly, and makes no mention whatsoever of bins of annotation instances and of accepting or rejecting all instances in a bin.

Claim 17 - Basu does not disclose if the user determines some examples in a particular bin of the inspected bins are correct, all of the at least one named entity or class annotation instance can be accepted within the particular bin and all bins with higher confidence level ranges than the accepted bin such that, at one time, entire groups of all the at least one named entity or class annotation instance can be accepted. Basu does not disclose bins. Therefore, Baus cannot argueably disclose bins with higher confidence level ranges than the accepted bin can be accepted.

Claim 18 - Basu does not disclose if the user determines some examples in a particular bin of the inspected bins are incorrect, all of the at least one named entity or class annotation instance can be rejected within the particular bin and all bins with lower confidence level ranges than the rejected bin such that, at one time, entire groups of all the at least one named entity or class annotation instance can be rejected. Basu does not disclose bins. Therefore, Baus cannot argueably disclose bins with lower confidence level ranges than the rejected bin can be rejected.

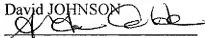
Claim 22 - Basu does not disclose that confidence levels associated with each of the annotation instances are generated using the Generalized Winnow learning algorithm. Contrary to the Examiner's assertion, page 25 of the specification does not equate any machine learning algorithm to the Generalized Winnow technique. Instead, it describes that the Generalized Winnow technique is an example of a machine learning algorithm that may be used with the invention. Basu does not disclose using the Generalized Winnow learning algorithm.

CONCLUSION

Reconsideration of the Final Office Action and allowance of the present application and all the claims therein are respectfully requested and believed to be appropriate.

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